# THE UPTAKE OF MANAGEMENT ACCOUNTING PRACTICES AMONG MALAYSIAN FIRMS IN SMES SECTOR

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## ABSTRACT

There have been the recent calls for additional research in order to enhance the understanding of the adoption of management accounting practices (MAPs) in small and medium sized enterprises (SMEs). This, allied to an increasing importance of SMEs around the world especially in developing countries, is the motivation for this research. This paper explores the uptake of a broad range of MAPs in 160 Malaysian SMEs firms in the manufacturing sector.

The study finds that both Malaysian small and medium firms made extensive use of traditional MAPs and only selectively use modern MAPs such as non-financial performance measures related to internal processes and to customers. Results for all MAPs also indicate that a higher usage by medium firms as opposed to small firms. In most part of MAPs, medium firms adopted as twice as many small firms. The most significant differences relate to the use of decision support system and strategic management accounting. The employment of high qualified accounting staff by medium firms may as well lead the relatively higher uptake of MAPs by medium firms. Besides, the increased uptake of sophisticated management accounting practices by larger firms is in line with size being a contingent variable for explaining the use of such practices.

Keywords: Management accounting practices, Small and medium-sized enterprises (SMEs), manufacturing sector, Malaysia

## 1. Introduction

Small and medium-sized enterprises (SMEs) make up the vast majority of the business population in most countries in the world therefore they constitute a vital force in modern information-based economies (Mitchell and Reid, 2000). In Malaysia the SMEs population comprises approximately 99 per cent of all Malaysian businesses (DOS[1], 2005). Therefore this sector plays a crucial role in the economy as an engine to generate economic growth in Malaysia as well as its significant ability to create employment. This sector has contributed substantially to the Malaysian Gross Domestic Product (GDP) and total exports as well as has attracted foreign direct investment (FDI) to the country. In light of both their significant contributions and potentials, there is a growing focus on this sector by policy makers in most countries. In Malaysia, the role of SMEs became more important

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after the 1990s especially after the Asian Crisis in 1997-1998. The country learnt not to be overly dependent on the foreign direct investment (FDI) in stimulating its economy and used SMEs as a new mechanism for generating the growth of its economy (Aris, 2007). The government has been called upon to put up clear policies, strategies and implementation matrixes to develop this sector through an integrated approach (Aris, 2007). For example in 9th Malaysia Plan (2006 – 2010), the principal SMEs policy strives for the development of a competitive, innovative and technologically strong SME sector, capable of meeting the increasing demands of globalization and intensifying competition (NSDC, 2007). In consequences various initiatives have been set in motion to build the capacity and capability of SMEs. For example, there have been efforts to improve the management and business methods in production, quality improvement, marketing and accounting skill (NSDC, 2007). However there is concern about a lack of exposure to management accounting among Malaysian SMEs since there is no specific reference to the use of MAPs. MAPs are an important tool through which management can promote efficiency, and potentially have an important influence on performance (see Ghosh and Chan, 1997; Lybaert, 1998; and Mitchell and Reid, 2000). In particular, within small firms, MAPs act as the key information system that plays a vital role as an efficient information-processing (Reid and Smith, 2002). Apart from that, the availability of financial and non-financial information provided by MAPs permits firms to effectively face competition in the market, coping with change, surviving and thereby improves performance (Mia and Clarke, 1999 and Reid and Smith, 2002). Although good MAPs may not by themselves guarantee success, an absence them or poorly implemented practices may significantly reduce the firm's competitive advantages (Folk *et al.* 2002). Therefore, given these advantages from MAP use, it is important to promote knowledge and awareness of MAPs among small business in Malaysia so that the firms may benefit advantages that have been highlighted above.

## 2. Literature review

There have been allegations about a lack of relevance of management accounting to managerial needs, especially in modern manufacturing, and about the existence of a gap between management accounting theory as portrayed in textbooks and management accounting in practice (Drury et al., 1993). The primary contention of these critiques was that management accounting fails to respond to developments in the technological and competitive environment, with the result that internal accounting information is frequently inaccurate and misleading (Drury et al., 1993). For example, Johnson and Kaplan (1987) in their book 'Relevance Lost: The Rise and Fall of Management Accounting' claimed that as management accounting had not changed since the early part of the twentieth century, it had lost relevance by failing to provide relevant information for managerial needs. In response to these concerns, a range of remarkable innovations in management accounting has emerged. The more contemporary management accounting combines both financial and non-financial information and take an explicit strategic focus (Chenhall and Langfield-Smith, 1998). This can be seen, for example in the design of activity-based costing (ABC), strategic management accounting (SMA) and contemporary performance measurement systems such as balanced scorecard (BSC). With this regard, more empirical researches have emerged in further years to investigate the current practices of management accounting in real organizations.

A number of studies have researched the adoption of management accounting practices in developed countries such as in Japan, U.S, U.K, other Europe countries and Australia (see for example Drury et al. 1993; Abdel-Kader and Luther, 2006; Shields et al. 1990; Scarbrough et al., 1991; Chenhall and Langfield-Smith, 1998; Wijewardena and De Zoysa, 1999 and Hyvo¨ nen, 2005). In developing countries comparable empirical studies did not emerge until the mid 1990s. Example include: Firth (1996); Ghosh and Chan (1997); Joshi (2001); Phadoongsitthi (2003); and El-Ebaishi et al. (2003). While these studies found the real management accounting practices in larger organizations, studies in a smaller firm or SMEs is still lacking. According to Mitchell and Reid (2000) empirical management

accounting research, particularly that designed to investigate technical innovation and development, has been concentrated on the larger enterprise. When change and novelty has been the target of researchers, they have not pursued their aim in small firms where the expertise and capacity to innovate in management accounting is unlikely to exist. This situation creates a challenge into the study of management accounting practice in smaller enterprises or SMEs. To date there is no research on management accounting practices and SMEs are found based on Malaysian cases. Therefore this paper contributes towards filling the gap in the literature. Additionally, this study can also provide vital input to the Malaysian regulators/policy makers to help improving the performance of SMEs sector.

The remainder of the article is structured as follows. In section 3 the research method is presented. The fourth section contains a discussion of the survey results. A comparison is made between findings from the current studies and those of prior surveys. Conclusions and implications for future research are presented in a final section.

## 3. Research method

A survey was administered to 1,000 Malaysian manufacturing firms in SMEs sector. The firms were selected from the Federation of Malaysian Manufacturers (FMM). This source, although not comprehensive, provides detailed information about SMEs in the manufacturing sector. The sample was mailed with the first survey comprising a cover letter, questionnaire and a reply paid envelope. To encourage completion of the questionnaire, participants were promised a summary of the results and informed that their responses were anonymous. A month after the first mailing, 87 replies were received. A second and third mailing was used to increase the responses rate. At the end of the process a total of 176 questionnaires were received giving a response rate of 17.6% (176/1000). Of these 16 were unusable for the following reasons:

- the firm was too small, had ceased operation, or was from another sector;
- the questionnaire had not been completed; and
- the firm did not want to participate in the survey.

Hence, 160 usable questionnaires were received which equal to the net usable response rate of 16.1% (160/993)[2]. The usable response rate received in this survey is marginally better than the expected response rate of between 12% and 15%. An expectation based on past response rates achieved by academic surveys of this type of population. Hence, it can be concluded that the usable response rate is considered acceptable and sufficiently large for analysis.

To examine for non-response bias, the responses from the first 30% of returns and those from the last 30% were compared, to test if responses differed between the two groups. The tests on profile of respondents as well as the use and the extent of management accounting practices were undertaken using chi-square and Mann-Whitney U non-parametric test. No differences were identified, providing some support for the absence of a non-response bias.

## 4. Survey results and discussion

### 4.1 Use of management accounting practices

[2] The usable response rate is calculated as follows: response rate = (number of completed and returned questionnaires) divided by (Number of respondents in sample – (non-eligible and non-reachable respondents)

The questionnaire first ascertained whether or not the respondents used each particular practice in their firms. If yes, further enquiry was then made into the extent of the use based on a four-point Likert scale. Table 1 details the extent to which there was any use of the designated management accounting practices.

Table 1: The result of use of management accounting practices and its rank

| | **Small** | | | **Medium** | | | **Total** | | |
|---|---|---|---|---|---|---|---|---|---|
| | *No* | *Yes* | *Rank* | *No* | *Yes* | *Rank* | *No* | Yes | *Rank* |
| Costing system | 24 | 76 | 2 | 14 | 86 | 1 | 17 | 83 | 1 |
| Budgeting system | 36 | 64 | 3 | 19 | 81 | 2 | 24 | 76 | 3 |
| Performance evaluation system | 22 | 78 | 1 | 20 | 80 | 3 | 21 | 79 | 2 |
| Decision support system | 54 | 46 | 4 | 28 | 72 | 4 | 37 | 63 | 4 |
| Strategic management accounting | 65 | 35 | 5 | 42 | 58 | 5 | 49 | 51 | 5 |

Notes: Total number of responses for small firm= 50; medium =110 and total firm: 160

The result shows that the majority of respondents have used the five management accounting areas identified. Use of the costing system, budgeting system and performance evaluation system are significantly higher than for the decision support system and strategic management accounting, which indicates that the uptake of traditional management accounting practices is greater than for sophisticated management accounting practices. The results for all practices also indicate that a higher usage by medium firms as opposed to small firms. The most significant differences relate to the use of decision support system and strategic management accounting. It is argued that the discrepancies are attributable to the relevance of those practices to the different size of the firms.

In terms of ranking, the most popular practice is performance evaluation within the small firms and costing system in medium firms. However for all respondents, costing system is the most widely used. In contrast, the least favoured practice is shown by strategic management accounting for both groups with only half of total respondents making any use of this practice suggesting that this technique is not yet practical for many small and medium firms in Malaysia.

### 4.2 The extent of the use of management accounting practices

This section will further investigate the frequency of use of 46 specific management accounting practices under the broad headings discussed in the above section (section 4.1). The extent of the use of management accounting was examined by requiring the respondents, who responded yes to using broadly classified management accounting practices, to indicate the frequency of use of a range of detailed management accounting practices using a five-point scale (where S1 indicates ‘never’ and S5 is ‘very frequently’). The following five subsections discuss further details.

#### 4.2.1 Costing system

To find out the extent to which practitioners applied their costing system to provide more accurate cost information, respondents were asked to indicate the frequency of use of eight techniques related to costing systems. The responses are summarized in Table 1.

Table 1: Descriptive statistics for costing systems and the ranking of techniques

| | Total uptake (%) | | | Frequency of use (S4 & S5) | Other descriptive statistics | | |
|---|---|---|---|---|---|---|---|
| | S | M | Total | % | Mean | Standard deviation | Rank |
| **Cost collection method** | | | | | | | |
| Job costing | 60 | 58 | 59 | 31 | 3.21 | 1.22 | 2 |
| Batch costing | 50 | 53 | 52 | 23 | 2.90 | 1.36 | 3 |
| Contract costing | 52 | 49 | 50 | 17 | 2.75 | 1.32 | 4 |
| Process costing | 66 | 75 | 73 | 50 | 3.76 | 1.13 | 1 |
| **Costing technique** | | | | | | | |
| Absorption costing | 46 | 49 | 48 | 29 | 3.21 | 1.40 | 1 |
| Variable costing | 50 | 53 | 52 | 23 | 3.19 | 1.14 | 2 |
| Activity-based costing | 36 | 46 | 44 | 22 | 2.87 | 1.44 | 3 |

Notes: S4: frequently; S5: very frequently S: Small; M: Medium

The result shows a surprisingly high uptake of an individual technique, given that few firms will use probably more than one cost collection method or one costing technique. The overall uptakes of small and medium firms is similar except for process costing and activity-based costing which are more commonly applied by medium firms. Overall it can be seen that most of the respondents make moderate use of techniques included under the heading costing system. Process costing is the most widely employed cost collection method and absorption and variable costing techniques are most commonly but by no means universally employed costing technique. The lower uptake for ABC is in line with previous research.

*Comparison of the results with those of previous studies*

The result obtained for costing systems is at variance with previous studies. The dissimilarities are probably explained by differences in size of the firms, type of industries and country setting between these respondents and the respondents in prior studies. This outcome is not unexpected as it was a justification for this study and is discussed in the literature review (see Chapter 4 section 4.1).

The prominent use of process costing among respondents in the present study is against the result in the previous studies. For example Shields *et al.* (1991) and Wijewardena and De Zoysa (1999) who studied among Japanese and Australian firms respectively discovered that more than 50% of respondents employed this technique. A slightly lower rate is reported by Lukka and Granlund (1995) who found that just over 40% of Swedish companies implemented process costing. The different results are possibly explained by the mix of industries surveyed in Malaysia, which include a significant portion that are identifiable as processing industries (36%) and because previous studies targeted considerable larger firms with a much lower non-use of cost collection methods.

Regarding the type of costing system, the findings show that absorption costing and variable costing dominate among respondents to the present study. Previous studies also noting the dominance use of absorption costing include Shields *et al.* (1990), Ask and Ax (1992) and Drury *et al*. (1993). Similarly the significant use of variable costing was also reported by Firth (1996), who indicated that more than 70% of Chinese firms were using this technique. Meanwhile both in India and Thailand the use of variable costing was found in more than 50% of firms (Joshi, 2001 and Phadoongsitthi, 2003).

The lower use of activity based-costing is consistent with most of the previous studies. For example, both studies by Armitage and Nicholson (1993) and Innes and Mitchell (1995) found that the uptake of ABC only up to 20% among respondents to their studies. A higher adoption of ABC is reported by a few U.S based studies. For example, studies by Green and Amenkhienan (1992) and Hrisak (1996) claimed that around 50% of survey respondents firms used ABC to some extent.

### 4.2.2 Budgeting system

The use of budgeting systems was investigated under the following three headings; type of budget prepared; timings of budgeting; and type of budget method.

Table 2: Descriptive statistics for budgeting systems and the ranking of techniques

| | Total uptake (%) | | | Frequency of use (S4 & S5) | Other descriptive statistics | | |
|---|---|---|---|---|---|---|---|
| | S | M | Total | % | Mean | Standard deviation | Rank |
| **Type of budget** | | | | | | | |
| Sales budget | 58 | 80 | 73 | 67 | 4.41 | 0.75 | 1 |
| Purchasing budget | 58 | 75 | 70 | 51 | 3.96 | 1.09 | 5 |
| Production budget | 56 | 78 | 71 | 57 | 4.08 | 1.04 | 4 |
| Cash flow budget | 58 | 77 | 71 | 60 | 4.33 | 0.82 | 2 |
| Financial position budget | 58 | 78 | 72 | 60 | 4.23 | 0.87 | 3 |
| **Timings** | | | | | | | |
| Monthly budget | 54 | 51 | 52 | 35 | 3.38 | 1.42 | 2 |
| Annual budget | 64 | 77 | 73 | 61 | 4.27 | 0.92 | 1 |
| Continuous/rolling budget | 50 | 49 | 49 | 27 | 3.19 | 1.30 | 3 |
| **Methods** | | | | | | | |
| Flexible budget | 50 | 63 | 59 | 40 | 3.67 | 1.16 | 1 |
| Incremental budgeting | 44 | 57 | 53 | 31 | 3.24 | 1.33 | 2 |
| Zero-based budgeting | 24 | 41 | 36 | 9 | 2.38 | 1.23 | 3 |

Notes: S4: frequently; S5: very frequently S: Small; M: Medium

The results show that the majority of respondents make use of budgeting systems in their firms. Of five type of budgets listed, unsurprisingly the sales budget is the most dominant (73%) indicating the vital role of raising revenue for business success. On the other hand, purchasing, production, cash flow and financial position budgets are moderately adopted by around 70% of all respondents. In terms of timing, annual budget is widely used (73%). Meanwhile monthly and continuous rolling budgets are used by around half the total respondents who had budgeting systems. To examine the relationship between type of budgets and its timings in detail, a (pair wise) joint use between these categories was calculated. Table 3 summarizes the results. Within the type of budgets, all of the budgets are highly used in a pair wise combination with every other budget especially the sales budget. The lowest pairing is shown by purchasing budget with around 75% on average. These budgets have the most common pairing with annual budget where around 85% of its respondents who used it frequently or very frequently employ a full budgeting system on an annual basis and around half prepare it monthly. Meanwhile, only around a third of respondents who frequently or very frequently do full budgeting prepare it continuously.

Table 3: Pair usage of type of budget and its timing
(*Values shown as % of those using pairs of techniques*)

| | | | ◊ Of those S4 and S5 using.... | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type of budget | | | | | Timings of budget | | |
| | | | SA | PC | PR | CF | FP | MT | AN | CN |
| •what percent also S3/S4 use? | Type of budget | SA | - | 98 | 96 | 94 | 94 | 93 | 95 | 91 |
| | | PC | 75 | - | 84 | 76 | 74 | 75 | 71 | 66 |
| | | PR | 81 | 93 | - | 83 | 82 | 82 | 80 | 82 |
| | | CF | 84 | 89 | 88 | - | 91 | 84 | 84 | 77 |
| | | FP | 85 | 88 | 88 | 92 | - | 87 | 87 | 82 |
| | Timings | MT | 48 | 50 | 49 | 48 | 49 | - | 49 | 68 |
| | | AN | 87 | 85 | 86 | 85 | 88 | 87 | - | 89 |
| | | CN | 37 | 35 | 51 | 35 | 37 | 55 | 40 | - |

This table should be interpreted as follows: '◊ Of those using COLUMN budget, •what percent also use ROW budget?' Because different numbers of respondents used each budget, the pair wise usages are not identical values, e.g., of those using sales budget (SA), 75% also use purchasing budget (PC); while of those using purchasing budget, 98% also use sales budget.

| | | | |
|---|---|---|---|
| SA | Sales budget | MT | Monthly budget |
| PC | Purchasing budget | AN | Annual budget |
| PR | Production budget | CON | Continuous budget |
| CF | Cash flow budget | | |
| FP | Financial position budget | | |

Notes: S4: frequently; S5: very frequently

Under the type of budget methods, medium firms obviously have indicated higher uptakes of all methods of budgets in comparison with small firms. Of the three budget methods listed, flexible budget is the moderately used by 59% of all respondents with a budget system using. Zero-based budgeting is the least used. The extensive use of flexible budgets probably reflects the high level of uncertainty facing these small and medium firms.

Under the type of budget methods, flexible budget is the moderately used by respondents. Zero-based budgeting is the least used. The extensive use of flexible budgets probably reflects the high level of uncertainty facing these small and medium firms. In term of size of firm, medium firms have a significantly higher uptake over small firms in all aspects apart from monthly budgets.

*Comparison with previous research*

The extensive use of full financial budgeting is consistent with Shields *et al.* (1991); Yoshikawa (1994) and Chenhall and Langfield-Smith (1998) who all concluded that in general budgeting systems are significantly employed. Meanwhile the significant use of flexible budgeting is consistent with Ahmad *et al.* (2003), who conducted a study among Malaysian firms, and found that flexible budget has been widely implemented among firms in Malaysia that use budgeting. This result is also similar with a finding by Drury *et al.* (1993) found that 42% of UK firms adopted flexible budgets which is 40% reported by total respondents of this study. A similarly result was reported by Pierce and O'Dea (1998) and Szychta (2002).

Meanwhile, the low uptake of zero-based budgeting is consistent with study by Joshi (2001) who found out that only 5% of Indian firms employed ZBB. Similarly Szychta (2002) found that only 28% companies in her survey utilized this technique.

### 4.2.3 Performance evaluation system

In measuring the extent of use of a performance evaluation system, a number of elements in performance measures, both financial and non-financial, were included in the questionnaire. The non-financial measures were grouped under three headings: customer; internal processes; and employees.

Table 4: Descriptive statistics for performance evaluation systems and the ranking of their techniques

| | Total uptake (%) | | | Frequency of use (S4 & S5) | Other descriptive statistics | | |
|---|---|---|---|---|---|---|---|
| | S | M | Total | % | Mean | Standard deviation | Rank |
| **Financial** | | | | | | | |
| Operating income | 74 | 79 | 78 | 66 | 4.29 | 0.84 | 2 |
| Return on investment | 64 | 74 | 71 | 36 | 3.41 | 1.15 | 9 |
| Variance analysis | 60 | 77 | 72 | 48 | 3.74 | 1.12 | 5 |
| Sales growth | 76 | 79 | 78 | 67 | 4.30 | 0.78 | 1 |
| Cash flows | 72 | 77 | 76 | 60 | 4.17 | 0.89 | 3 |
| **Internal processes** | | | | | | | |
| Number of warranty claims | 58 | 62 | 61 | 22 | 2.80 | 1.31 | 13 |
| On-time delivery | 78 | 79 | 79 | 56 | 3.97 | 0.95 | 4 |
| Manufacturing lead time | 70 | 73 | 72 | 49 | 3.75 | 1.14 | 7 |
| Defect rate | 72 | 75 | 74 | 47 | 3.72 | 1.16 | 8 |
| **Customer** | | | | | | | |
| Number of customer complaints | 76 | 77 | 77 | 51 | 3.80 | 1.09 | 6 |
| Survey of customer satisfaction | 76 | 75 | 76 | 35 | 3.37 | 1.10 | 11 |
| **Employees** | | | | | | | |
| Employee turnover | 68 | 76 | 74 | 37 | 3.40 | 1.12 | 10 |
| Absentee rates | 68 | 75 | 73 | 33 | 3.36 | 1.10 | 12 |

Notes: S4: frequently; S5: very frequently S: Small; M: Medium

Table 4 indicates that the majority of firms reporting use of performance evaluation measures make considerable use of a range of performance measures with uptakes across categories varying from a minimum of 61% up to 79%. Medium firms have a much higher use of these measures compared to small firms. Nevertheless both small and medium firms have shown good uptakes of most performance evaluation measures. The results also show that a significant number of respondents have adopted one or more measures both financial and non-financial but that reliance on financial measures is greater than for non-financial measures. The main non-financial measures frequently used by respondents are on-time delivery, number of customer complaints and manufacturing lead time. These findings suggest that respondents, who use non-financial performance measures, are more internal-process and customer focused rather than employee focused.

*Comparison with previous research*

The extensive use of financial measures of performance is consistent with other studies (see for example, Joshi (2001); Phadoongsitthi (2003); Abdel-Kader and Luther (2006) and Jusoh and Parnell (2008). Phadoongsitthi (2003) reported that most Thai firms still focus on financial performance measures such as budget variance analysis, return on investment, cash flow return on investment, and divisional profit Similarly Jusoh and Parnell (2008) revealed that many Malaysian manufacturing firms placed a greater emphasis on financial rather than non-financial measures. These studies

however reported that return on investment was extensively employed which is inconsistent with the present study. As elsewhere, this difference probably reflects the size of the sample firms compared to those in these studies as smaller firms either have less involvement in investment activities or approach it less formally than larger firms.

With regard of non-financial performance measures, measures related to internal processes and customers are found have a high adoption rate among the majority of respondents (see for example, Chenhall and Langfield-Smith (1998); Phadoongsitthi (2003); Abdel-Kader and Luther (2006) and Abdel-Maksoud (2008). Phadoongsitthi (2003) indicated that Thai firms increase their focus on customer satisfaction and on-time delivery when considering performance. Likewise Abdel-Maksoud (2008) indicated that the overwhelming majority of UK manufacturing companies measure performance in terms of delivery timeliness and number of complaints from customers and customer satisfaction.

### 4.2.4 Decision support system

The extent of use of decision support systems was approached through dividing the area between short-run and long run decisions as indicated in Part D of Table 5, which summarises the responses.

Table 5: Descriptive statistics for decision support system

| | Total uptake (%) | | | Frequency of use (S4 & S5) | Other descriptive statistics | | |
|---|---|---|---|---|---|---|---|
| | S | M | Total | Total respondents | Mean | Standard deviation | Rank |
| **Short-run** | | | | | | | |
| Break-even analysis | 40 | 63 | 56 | 31 | 3.60 | 1.08 | 2 |
| Stock control model | 44 | 65 | 58 | 32 | 3.55 | 1.00 | 3 |
| Product profitability analysis | 40 | 70 | 61 | 51 | 4.04 | 0.77 | 1 |
| Customer profitability analysis | 38 | 65 | 56 | 27 | 3.39 | 1.04 | 6 |
| **Long-run** | | | | | | | |
| Payback | 38 | 63 | 55 | 28 | 3.37 | 1.17 | 4 |
| Accounting rate of return | 36 | 56 | 50 | 24 | 3.17 | 1.23 | 7 |
| Net present value | 32 | 57 | 49 | 23 | 3.12 | 1.23 | 5 |
| Internal rate of return | 30 | 58 | 49 | 23 | 3.04 | 1.22 | 8 |

Notes: S4: frequently; S5: very frequently S: Small; M: Medium

The overall uptake of decision support system is relatively low. The short-run category has an adoption rate around 60% of respondents, against around 50% for the long-run category. Medium firms have far greater uptake of all techniques than small firms. Under medium firms the uptake ranges from 56% to 70% which is almost a quarter greater than small firms (from 32% to 44%). This finding clearly suggests that larger firms are more likely to use a sophisticated approach to management accounting. It can be concluded that only a moderate number of respondents make use of short-term decision support analysis tools beyond product profitability, and infrequent use of long-run techniques.

*Comparison with previous research*

The percentage uptake of product profitability analysis is at the low end of previous research findings. For example, Chenhall and Langfield-Smith (1998), Joshi (2001) and Drury and Tayles (2006) reported that the product profitability technique was used by more than 80% of firms in their studies This is reasonable as the sample is taken from relatively small-size firms, whereas previous findings mostly included large companies. The other short-term analysis tool that was frequently reported on in

previous studies is break-even analysis. These studies consistently reported infrequent use of this technique which is in line with the result of this study. For example in Ireland, Szychta (2002) found that this technique was used by just under 50% respondents. Meanwhile Abdel-Kader and Luther (2006) found that just under 40% of U.K firms often or very often utilized this technique.

Capital investment analyses have been widely investigated. The present study indicates a low use of all types of long-run analyses tools especially discounted analyses and this is consistent with previous studies. For example, Shields *et al*. (1991); Lazaridis (2004) and Abdel-Kader and Luther (2006) reported use of NPV and IRR at between 9% and 19%. Payback is the most popular technique but the rates of uptake are lower than either Shields *et al.* (1991) or Yoshikawa (1994) who reported usage rates well above 50% among Japanese firms.

### 4.2.5 Strategic management accounting (SMA)

The extent of use of a strategic management accounting based on six relevant variables is shown in Table 6.

Table 6: Descriptive statistics of strategic management accounting

| | Total uptake (%) | | | Frequency of use (S4 & S5) | Other descriptive statistics | | |
|---|---|---|---|---|---|---|---|
| | S | M | Total | % | Mean | Standard deviation | Rank |
| Target costing | 34 | 55 | 49 | 29 | 3.77 | 1.00 | 2 |
| Strategic costing | 36 | 52 | 47 | 25 | 3.51 | 1.02 | 5 |
| Value chain | 36 | 54 | 48 | 28 | 3.65 | 0.99 | 4 |
| Life cycle cost | 36 | 55 | 49 | 31 | 3.70 | 1.01 | 3 |
| Strategic pricing | 36 | 56 | 50 | 35 | 3.92 | 0.87 | 1 |
| Competitor position monitoring | 36 | 55 | 49 | 26 | 3.59 | 1.01 | 6 |

Notes: S4: frequently; S5: very frequently S: Small; M: Medium

The result indicates that the overall uptake of individual strategic management accounting practices is low among respondents. Small firms have a considerably lower adoption rate than medium firms who report between 52% and 56% uptake of each listed technique. In term of total respondents, none of the techniques are adopted by more than half of total respondents. The result is expected due to the size of the responding firms. Overall, the usage of strategic management accounting practices is low. This is probably for similar reasons to those for decision support systems. The result mirrors Guilding *et. al* (2000), who in a multi-country study reported low usage rates for these techniques.

*Comparison with previous research*

Table 6.12 suggests that strategic pricing, target costing and life cycle costing are the top three techniques used by respondents. Nevertheless it is noted that the overall uptake and the frequency of use is considered low. The top position of strategic pricing is consistent with Guilding *et al.* (1999) who found that strategic pricing is the most widely-used among large companies in New Zealand, the United Kingdom and the United States. In term of life cycle costing, the present result is consistent with studies by Chenhall and Langfield-Smith (1998) and Joshi (2001). However Abdel-Kader and Luther (2006) reported that only 5% UK firms often or very often employed this analysis.

The use of target costing by around 50% of total sample parallels results in prior studies. For example, Chenhall and Langfield-Smith (1998) reported that target costing was used by less than half of Australian firms and Cinquini *et al.* (1999) indicated a very low use of target costing in Italy where

only 15% firms utilized this technique. Similarly Joshi (2001) reported that just over a third of Indian firms used this technique, and Abdel-Kader and Luther (2006) found that just under a quarter of British firms often and very often employed target costing.

The low use of value chain analysis and competitive monitoring position is also consistent with previous research. For example both Chenhall and Langfield-Smith (1998) and Joshi (2001) reported a relatively low use of value chain analysis in their studies. Further, Abdel-Kader and Luther (2006) revealed that competitive position analysis and value chain analysis is frequently used by 33% and 19% respectively of British firms which is not far different with the present result which is 26% and 28% respectively.

## 5. Summary and conclusion

This research has reported descriptive statistics on the uptake of management accounting practices within Malaysian SMEs in the manufacturing sector. The adoption rate for traditional management accounting techniques was higher for established practices (budgeting, performance evaluation and costing) than for more recently developed practices (decision support system and SMA). The adoption rate for performance evaluation system is particularly higher on financial performance measures compared to the non-financial performance measures. Further the uptake of management accounting practices was higher for medium firms than for small firms. The difference was particularly notable for the more recently-developed practices; decision support system and SMA where use by medium firms was significantly higher.

The study also investigated the specific extent of use by Malaysian SMEs of a range of specific management accounting techniques. Responses detailed the extent of use of 46 management accounting techniques grouped under the five broad headings for MAPs stated earlier. The results shows that process costing is the most widely used cost collection method, and absorption and variable costing are the most frequently applied costing techniques. The high use of process costing is consistent with the sectors that respondents were in. The majority of the respondents also indicate high use of full financial budgeting. Annual budgeting was the commonest timing for budgets and there was consistent use of flexible budgeting. In evaluating firm performance, most of the respondents indicated a high use of financial performance measures as opposed to non-financial measures. The most used among non-financial measures related to internal processes and customers, while those connected to employees are the least used. Techniques, listed under decision support system and SMA have rather a limited and lower frequency of use. Under the decision support system, the results show that product profitability analysis is used the most. SMA uptake was the lowest among all five areas of management accounting practices. Small and medium firms have similar uptakes on costing and performance evaluation systems. However medium firms had a higher uptake than small firms in the use of full financial budgeting, decision support systems and SMA.

The findings produce some original results on the use of management accounting practices by Malaysian SMEs. The results suggest that in general, Malaysian SMEs and especially medium size enterprises have widely adopted basic techniques of management accounting, for example costing; full budgeting systems and financial performance measures. This prioritisation of basic techniques of accounting and management accounting is reasonable and somewhat expected in a smaller business context. Furthermore since the respondents are based in a developing country, the employment of new management accounting skills, such as ABC, SMA and other modern techniques, would expect to be lower than for basic techniques as it is in developed countries. This view is in line with Chun *et al.* (1994) who claimed that Malaysian firms prefer to employ traditional management accounting systems to meet their needs for external and internal reporting purpose. Other research on developing countries such as Joshi (2001) in India; El-Ebaishi *et al*. (2003) in Saudi Arabia and Phadoongsitthi

(2003) in Thailand also support this position. Joshi (2001) argued that the reasons of a low adoption of newly developed practices in Indian firms are the conservative attitude of Indian management, autocratic leadership, and long term orientation. Many Indian companies believe that it is quite expensive to adopt the new management accounting techniques particularly, for benchmarking. Lack of training and expertise in these areas are other possible reasons. Phadoongsitthi (2003) in Thailand supported the view by Joshi (2001) by stating that the reasons for such similarities of low adoption of newly developed management accounting practices between Thai and India is because both countries have cultural similarities like large power distance and low individualism group and both countries facing similar problems like the lack of training and expertise. Research in developed countries (see, for example, Chenhall and Lang-field Smith, 1998; Pierce and O'Dea, 1998 and Abdel-Kader and Luther, 2006), although reporting an increasing usage of modern management accounting practices, agreed that basic or traditional management accounting practices are still dominant in most firms. It is argued that high acceptance of traditional techniques may be attributed to the fact that information on these measures is the most readily available as opposed to modern management accounting techniques. The sophisticated systems are not widely adopted in practice possibly due to the uncertainties, practicalities and costs involved in obtaining the information.

The results of the chapter also indicate some striking differences between the adoption level for newer techniques between small and medium firms. The results suggest that the frequency of use of certain MAPs especially sophisticated management accounting practices in small firms is significantly lower than for medium firms. The increased uptake of sophisticated management accounting practices by larger firms is in line with size being a contingent variable for explaining the use of such techniques. Interestingly this result is replicated in most previous literature (see for example Holmes and Nicholls, 1999; Hoque and James; 2000; Lamminmaki and Drury, 2001; Collis and Jarvis, 2002; Al-Omiri and Drury, 2007; Ismail and King 2007; Cadez and Guilding, 2008 and Abdel-Kader and Luther, 2008) even though the population from which the target sample is drawn is unusual in terms of country size and the developing country context.

Therefore it is suggested that within Malaysian small and medium firms, there is extensive use of basic management accounting practices. Medium enterprises make greater use of management accounting practices in comparison to small firms thus supporting the contingency theory of the impact of size on the use of management accounting practices. This difference in uptake is greater for modern management accounting practices, which are employed reasonably extensively by medium enterprises but markedly less so by small enterprises.

The study suggests that there is ample room to increase both awareness of and understanding of the importance of MAPs within smaller firms since these practices are very important ingredients in the success of any organizations. The results indicated that traditional and financially oriented MAPs have high level of usage but the adoption of newly-developed management accounting practices remains patchy. Perhaps Malaysian policy makers could provide training in these techniques for entrepreneurs or future graduates in Malaysia.

This research has increased knowledge of MAPs in a SMEs context. Malaysia as a developing country has strived to move to parity with more developed economies, will find the research useful to provide relevant knowledge that can support efforts to enhance the performance of Malaysian SMEs. The findings will be informative for policy makers intent on developing management accounting skills among Malaysian SMEs. This study can be also a starting point for further investigations and analysis of MAPs among SMEs in Malaysia.

In conclusion, the work presents a comprehensive survey and explanations of the use of MAPs in SMEs and therefore makes a contribution to the awareness of management accounting in small firms particularly in a developing economy.

This study has certain limitations. First, the low response to the questionnaire survey potentially introduces non-response bias especially for small firm category. Hence the sample of small firms should be extended to achieve a valid set of responses. Secondly the nature of the dependence between traditional and sophisticated MAPs needs further investigation. The lower use of sophisticated MAPs raises the question of the conditions necessary to effectively implement these techniques within smaller firms. Again a qualitative case study approach would provide real insights that could not be gleaned from a questionnaire survey approach.

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